CLAIMS

1. A method of preparing a stent comprising the steps of:

providing a stent preform;

providing a particulate radiopaque material on at least a portion of the stent preform;

pressing the particulate radiopaque material into a desired portion of the stent preform; and

processing the stent preform into a stent.

2. The method of claim 1 wherein the stent preform is in the form of a sheet during the pressing step.

3. The method of claim 2 wherein the stent preform is rolled during the processing step.

4. The method of claim 3 wherein a first edge of the stent preform is secured to the second edge during the processing step.

5. The method of claim 3 wherein the stent preform is provided with a stent pattern prior to the pressing step.

6 The method of claim 3 wherein the stent preform is provided with a stent pattern subsequent to the pressing step.

7. The method of claim 1 wherein the stent preform is in the form of a tube during the pressing step.

8. The method of claim 7 wherein the stent preform is provided with a stent pattern prior to the pressing step.

9 The method of claim 7 wherein the stent preform is provided with a stent pattern subsequent to the pressing step.

10. The method of claim 1 wherein the processing step includes the step of heat treating the stent preform after the particulate radiopaque material has been disposed on the stent preform.

11. The method of claim 10 wherein the particulate radiopaque material is coated or compounded with a diffusion activating substance.

12. The method of claim 11 wherein the diffusion activating substance is boron.

13. The method of claim 10 wherein the stent preform is heated to a temperature above ambient temperature and less than the melting points of the stent preform and the

particulate radiopaque material.

14. The method of claim 1 wherein the particulate radiopaque material is selected from the group consisting of particulate tantalum, particulate tungsten, particulate platinum, particulate iridium, particulate gold, particulate bismuth, particulate zirconium, particulate barium and alloys thereof.

15. The method of claim 1 wherein the particulate radiopaque material is selected from the group consisting of elements having an atomic weight of at least 43 and alloys thereof.

16. The method of claim 14 wherein the stent preform is made from metal.

17. The method of claim 16 wherein the metal is selected from the group consisting of stainless steel, titanium and nitinol.

18. The method of claim 1 wherein the stent preform is in the form of a sheet and the pressing step includes the steps of placing the stent preform between two platens and applying a force to the stent preform with one or more of the platens.

19. The method of claim 1 wherein the pressing step is repeated one or more times.

20. The method of claim 19 wherein an additional quantity of the particulate radiopaque material is placed on the stent preform in between or during the pressing steps.

21. The method of claim 1 wherein the pressing step is accomplished by directing the stent preform through a rolling mill.

22. The method of claim 21 wherein the particulate radiopaque material is disposed on the stent preform prior to the step of pressing.

23. The method of claim 21 wherein at least some of the particulate radiopaque material is disposed on the stent preform during the pressing step.

24. The method of claim 1 wherein the stent preform has a thickness which is reduced during the pressing step.

25. The method of claim 1 wherein the stent preform has a thickness which is substantially unchanged by the pressing step.

26. The method of claim 1 wherein the particulate radiopaque material is characterized by an average particle size of 5 microns or less.

27. The method of claim 1 wherein the particulate radiopaque material is of -325 mesh or smaller.

28. The method of claim 1 wherein the particulate radiopaque material is provided mixed with a binder.

29. The method of claim 1 wherein the particulate radiopaque material is provided in the form of a dry powder.

30. The method of claim 1 wherein the particulate radiopaque material is provided in the form of a slurry.

31. The method of claim 1 wherein the stent precursor has a rough surface, the particulate radiopaque material disposed on the rough surface.

32. The method of claim 1 wherein the particulate radiopaque material is disposed in a liquid.

33. The method of claim 32 wherein the liquid is jet blasted against the stent precursor during the pressing step.

34. The method of claim 1 wherein the stent has an outer surface and an inner surface, the entirety of the outer surface being radiopaque.

35. The method of claim 1 wherein the stent has an outer surface and an inner surface, the entirety of the inner surface being radiopaque.

36. The method of claim 1 wherein the stent has a first end and a second end, only a portion of the first end and only a portion of the second end being radiopaque.

37. The method of claim 1 wherein the stent precursor comprises a polymeric material.

38. The method of claim 37 wherein the stent precursor is made entirely of a polymeric material.

39. The method of claim 37 wherein the stent precursor comprises a layer of polymeric material and the particulate radiopaque material is pressed into the polymeric material during the pressing step.

40. The method of claim 37 wherein the particulate radiopaque material is pressed into the polymeric material.

41. The method of claim 1 wherein the particulate radiopaque material is blasted into the stent preform during the pressing step.

42. The method of claim 1 wherein the particulate radiopaque material is deposited on the stent preform via a method selected from the group consisting of vacuum deposition, grit blasting, plasma spraying and jet blasting prior to the pressing step.

43. An implantable medical device comprising a plurality of radiopaque regions including a first radiopaque region and a second radiopaque region, the first and second radiopaque portions of different radiopacities.

44. The implantable medical device of claim 43 in the form of a stent.

45. The implantable medical device of claim 44 wherein the first and second radiopaque regions are adjacent one another.

46. The implantable medical device of claim 44 wherein the first and second radiopaque regions do not abut one another.

47. The implantable medical device of claim 44 wherein the amount of radiopaque material per unit area in the first region exceeds the amount of radiopaque material per unit area in the second region.

48. The implantable medical device of claim 44 wherein the first radiopaque region comprises a first radiopaque material and the second radiopaque material comprises a second radiopaque material of a different chemical composition from the first material.